

ABSTRACT:

A gamma correction circuit for correcting a digital video signal, the circuit comprising first (6) and second (8) lookup tables for storing discrete output intensity data and the associated slope data of a non-linear transfer function, respectively, for each of the discrete input video signal intensities, an adder (10) having a first input connected to the output of the first lookup table, a multiplier (12) having a first input connected to the output of the second look-up table (8), characterized by a quantizer (4) for providing the most significant bits of the incoming video signal to address the first (6) and second (8) lookup tables and to transfer the corresponding output intensity data to the adder (10) and the associated slope data to the multiplier (12), the quantizer (4) transmitting the remaining least significant bits of the input video signal to the second input of the multiplier (12), the multiplier (12) multiplying the slope data with the remaining least significant bits and feeding the multiplication result to the second input of the adder (10), the adder (10) adding the output intensity data and the multiplication result to generate a corrected video signal.

(Fig. 1)